

Cape Lookout National Seashore Colonial Waterbird 2015 Summary



Old Drum Inlet April 2015 from Middle Core Banks looking to the North. 2015 NPS Photo.

National Park Service
Cape Lookout National Seashore
131 Charles Street
Harkers Island, NC 28531

Introduction

The inlet spits, sandflats, inshore islands, and point of Cape Lookout National Seashore (CALO) provide nesting habitat for several species of Colonial Waterbirds (CWB). The least tern (*Sternula antillarum*), common tern (*Sterna hirundo*), gull-billed tern (*Gelochelidon nilotica*), black skimmer (*Rynchops niger*), sandwich terns (*Thalasseus elegans*) and royal tern (*Thalasseus maxima*) nest here in single species and mixed species colonies.

Methods

Nesting habitat is signed in the spring by April 1st. Reoccurring nesting sites include Power Squadron Spit, Cape Point, Ophelia Inlet, New Drum Inlet Flats, Old Drum Inlet Flats, Kathryn-Jane Flats, Portsmouth Flats, and Ocracoke Inlet tip. Potential nesting habitat is monitored and signed closed as the birds colonize a site. Posted closures typically include the upper beach, interior, and/or soundside to provide a 150 foot buffer. If chicks were present on the lower ocean beach vehicles are restricted and/or detoured to avoid flightless chicks.

The annual least tern window census occurs from June 5th-20th. Breeding pairs were counted by either a perimeter count of incubating pairs or a total number adult count. Total adult counts were then divided by two to ascertain the number of breeding pairs. No correction factor was employed in the results. The assumption being that all birds present within the breeding colony site are there as breeders. Counts were conducted by the staff biologist and biological science technicians. A GPS point was recorded at the center of the colony. Monitoring throughout the summer included weekly counts of adults, incubating nest/pairs, ground nest counts, number of chicks and fledglings, and buffer distance checks. Closures were posted, expanded, reduced, and removed as needed. Fledge success was observationally rated as high, medium, low, none or unknown

Results

There were 21 CWB nesting sites monitored in the seashore (Figure 1). Ten colonies were on North Core Banks (NCB), including the Middle Core section and ten colonies were on South Core Banks (SCB). There were no nesting terns or skimmers on Shackleford Banks (SB). One colony was located on Morgan Island. Twelve single species colonies were occupied by least terns, while nine colonies were of mixed species. The largest colonies were at Old Drum Inlet, Ophelia Inlet, Morgan Island and Cape Point during the June 5th-20th peak counts. There were 34 least terns (LETE) pairs in the Old Drum Inlet area (Appendix 1). There were 199 LETE, 10 black skimmer (BLSK), and 3 common tern (COTE) pairs counted in the Ophelia Inlet area. At Cape Point spit there were 7 LETE, 46 BLSK and 7 COTE pairs counted. The least tern window census counted 353 total breeding pairs throughout the seashore on Core Banks (Appendix 2).

The Morgan Island colony chick banding study reported 505 royal tern (ROYT) chicks and 74 sandwich tern (SATE) chicks.

Discussion

The Cape Point colony started on May 12th when nest scrapes were first observed and 12 LETE and 2 COTE pairs were recorded. Coyote activity and flooding eventually reduced the colony size after two re-nesting attempts. The colony did produce 7 recorded fledglings, but overall success was low. The nesting closure was reduced on 7/30 and removed by mid-August. The Ophelia Inlet spit on SCB was productive initially, but chick and fledgling production was low for unknown reasons. Sufficient monitoring proved to be a challenge in 2015 with lower than expected staff levels to cover all the species monitoring.

The royal terns successfully used Morgan Island again as a nesting site in 2015. Prior to 2013 royal terns had not nested on this inshore dredge spoil island since 1977. Although it is now heavily vegetated ROYT and SATE nested on a small sandy beach. A permitted research project banded 505 ROYT and 74 SATE chicks on 7/7.

The least tern window census in 2015 recorded 353 breeding pairs, a decrease from last year (Chart 1.). The 2014, 2013, 2012, 2011, 2010, 2009, 2008, 2007 and 2006 counts recorded 542, 322, 577, 608, 789, 288, 502, 285 and 310 breeding pairs, respectively. Least terns were widely scattered in multiple small nesting groups as in past years. The number of colonies decreased from 24 in 2014 down to 21 in 2015.

Chart 1. Least Tern window census, June 5th-20th, counts from 2006 to 2015.

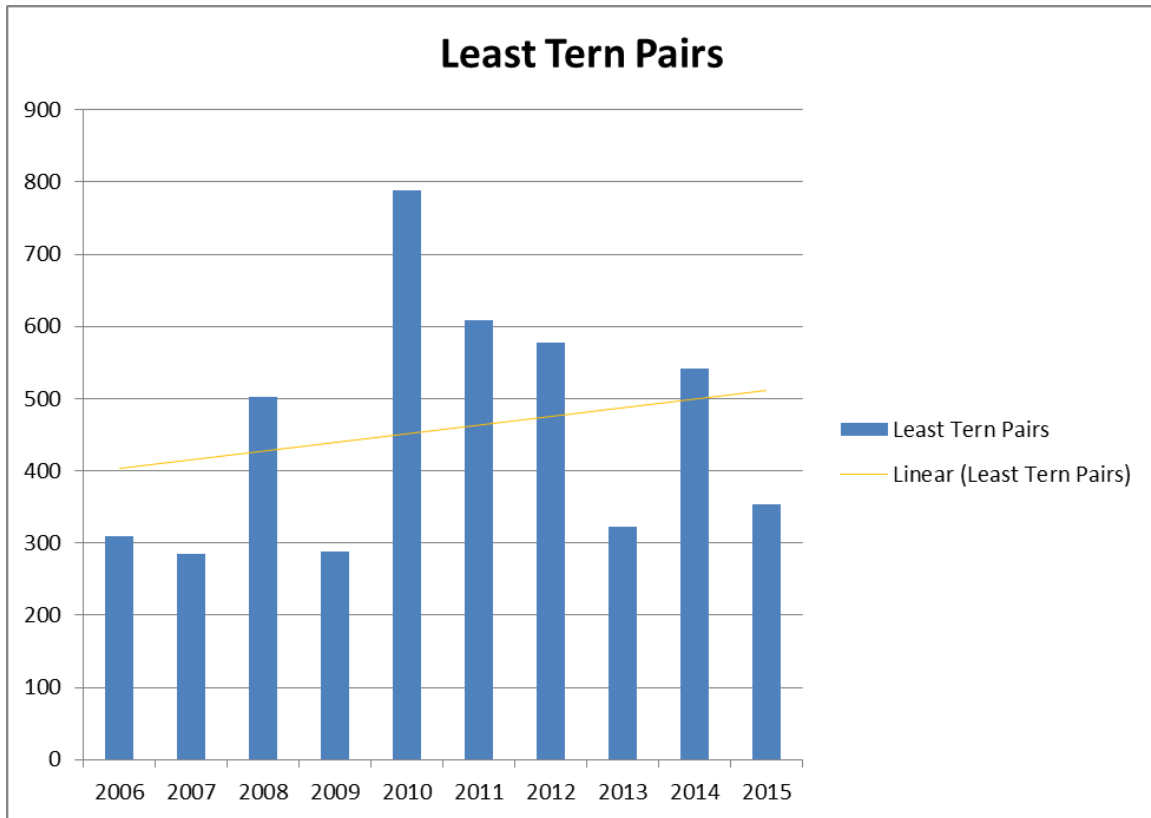
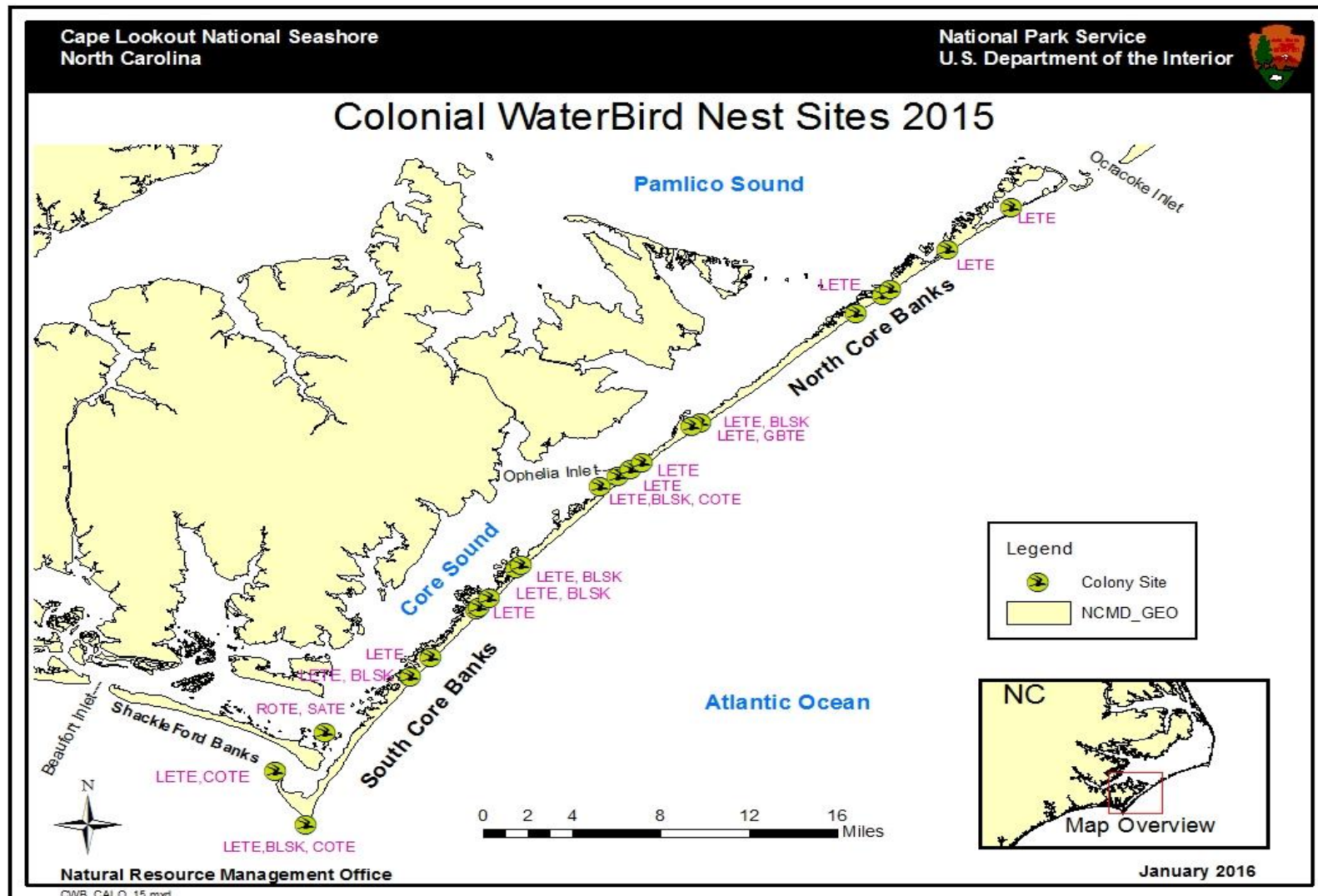


Figure 1



Appendix 1. 2015 Colonial Waterbird Data

ID	Island	Mile	Site Description	Latitude	Longitude	Dates Active	Count date
1	NCB	2.5	Portsmouth Flats	35.04049	-76.07413	18-May to 6-Aug	10-Jun
2	NCB	5.92	upper beach shellbed	35.00972	-76.11565	20-May to 14-Aug	17-Jun
3	NCB	8.82	upper beach shellbed	34.98078	-76.1527	20-May to 3-Jun	na
4	NCB	9.18	upper beach shellbed	34.97695	-76.15772	27-Jun to 27-Jul	na
5	NCB	10.57	upper beach shellbed	34.96365	-76.17545	13-May to 21-Jul	19-Jun
6	NCB	18.55	Old Drum, NCB side	34.88382	-76.27702	12-May to 16-Jul	15-Jun
7	NCB	18.94	Old Drum, MCB side	34.88082	-76.28295	12-May to 20-Jul	8-Jun
8	MCB	21.51	New Drum Wash	34.85462	-76.31544	18-May to 8-Jul	18-Jun
9	MCB	22.05	New Drum Flats	34.84962	-76.32276	15-May to 8-Jul	18-Jun
10	MCB	22.68	Ophelia spit	34.84425	-76.33138	12-May to 20-Jul	18-Jun
11	SCB	23	Ophelia Inlet	34.83689	-76.34268	6-May to 1-Aug	8-Jun
12	SCB	28.35	upper beach shellbed	34.77965	-76.39406	7-Jun to 9-Aug	7-Jun
13	SCB	28.64	shellbed behind dunes	34.77665	-76.39767	2-Jun to 17-Jul	26-Jun
14	SCB	30.42	upper beach shellbed	34.75554	-76.41553	9-July to 22-Aug	na
15	SCB	31.04	upper beach shellbed	34.74838	-76.42183	22-May to 22-Aug	na
16	SCB	31.17	shellbed behind dunes	34.74688	-76.42351	8-May to 6-Jul	na
17	SCB	34.12	upper beach shellbed	34.71201	-76.4539	20-Jun to 1-Aug	20-Jun
18	SCB	35.35	upper beach shellbed	34.69775	-76.46655	21-May to 21-Aug	na
19	SCB	44	Cape Point	34.58989	-76.53542	12-May to 16-Jul	7-Jun
20	SCB	47	Power Squadron Spit	34.62907	-76.55487	12-May to 9-Jul	10-Jun
21	MI		Morgan Island	34.65698	-76.52271		na

ID	Peak Counts	Count Type	Count 1	Count 2	Success
1	33 LETE pairs, 3 chicks	pair	11 LETE fledges and 4 chicks on 6/30	5 LETE pairs, 1 nest, 3 chicks on 7/28	low
2	20 LETE pairs	pair	8 LETE fledges, 1 chick, 3 nests and 21 pairs on 6/29	1 LETE older chick on 8/6	low
3	na		1 LETE pair/nest on 5/20	2 LETE chicks in nest cup on 6/3	none
4	na		4 LETE pairs, 2 nests, 1 chick on 6/27	1 LETE older chick on 7/27	none
5	5 LETE pair	pair	3 LETE pairs, 2 chicks on 6/10	2 LETE fledges seen on 7/17	low
6	10 LETE , lots of raccoon tracks	pair	53 LETE pairs, 7 BLSK pairs on 6/2	9 LETE pairs, 2 BLSK pairs, 2 LETE fledges, 1 chick	low
7	24 LETE	pair	48 LETE pairs with 7 nests found on 5/15	4 LETE Fledges, 1 GBTE fledge on 7/15	low
8	2 LETE pairs, 1 chick	pair	2 LETE pairs, 1 nest on 5/18	2 LETE pairs on 7/8	none
9	14 LETE pairs incubating	pair	5 LETE pairs, 1 nest on 5/15	6 LETE pairs, no nest seen on 7/8	none
10	31 LETE pairs, 4 fledges	pair	73 LETE nests, 3 COTE nests, BLSK scrapes on 5/21	6 LETE fledges on 7/8	low
11	168 LETE 1 chick, 3 COTE, 10 BLSK	pair	183 LETE pairs 1 chick, 2 COTE pairs, 10 BLSK pairs on 6/4	24 LETE incubating, 2 chicks, 12 fledglings, 4 COTE incubating, 117 BLSK total adults on 7/9	low
12	10 LETE pairs, 2 chicks, 1 nest	pair	7 LETE pairs on 6/26	8 LETE pairs incubating, 7 fledglings, 9 BLSK total adults on 7/6	low
13	6 LETE pairs	pair	4 LETE pairs, 3 chicks on 6/3	4 LETE fledglings, 2 BLSK adults on 7/6	low
14	na		1 LETE chick on 7/9	2 LETE chicks on 7/25	low
15	na		LETE 3 fledglings and 2 chicks on 6/27	1 LETE chick on 8/2	low
16	na		1 LETE nest on 5/17	2 LETE chicks in nest cup on 6/28	none
17	10 LETE incubating pairs, 3 chicks	pair	3 LETE chicks, 2 pairs on 7/16	3 LETE fledglings on 7/23	low
18	na		22 LETE pairs incubating, 1 fledgling on 7/3	7/23 -28 BLSK total adults, 2 LETE pairs, 5 fledglings	low
19	46 BLSK, 7 LETE, 7 COTE	pair	30 LETE pairs and 1 chick, 28 BLSK, 2 COTE pairs on 6/10	9 COTE incubating and 2 fledges, 8 BLSK Incubating, 19 LETE incubating with 5 fledglings on 7/5	low
20	13 LETE	pair	19 LETE pairs, 1 COTE pair on 5/29	2 LETE fledglings on beach 6/23	low
21	ROTE and SATE		ROTE and SATE	505 ROTE and 74 SATE chicks banded on 7/7	High

ID	Comments
1	
2	closure removed on 8/18
3	no LETE on 6/17
4	closure removed on 8/6
5	closure removed on 8/2
6	
7	original nesting closure extended to the northwest
8	
9	
10	0 nests on 5/28, predator?
11	many LETE chicks noted on 6/18. BLSK nested late and then colony suddenly inactive on 8/1.
12	3 LETE fledglings on 8/1, closure removed on 8/9
13	closure removed on 7/17
14	1 LETE fledgling on 7/16 and 7/23, closure removed 8/22
15	7/19 two chicks in nest cup, closure removed on 8/22
16	No LETE on 7/6, closure removed on 7/13
17	closure removed on 8/4
18	one BLSK still on nest on 8/13, no activity and closure removed on 8/21
19	closure expanded on 6/17, 6/28 and east beach closure on 5/19 for AMOY chicks, significant flooding on 7/16, coyote tracks repeatedly observed
20	coyote tracks in colony site repeatedly, closure removed on 8/21
21	

NCB= North Core Banks
SCB= South Core Banks

LETE= least tern
GBTE= gull-billed tern

COTE= common tern
BLSK= black skimmer

ROYT= royal tern
SATE= sandwich tern

Appendix 2.

2015 Least Tern Window Census June 5-20

North Core Banks: 139 breeding pairs

South Core Banks: 214 breeding pairs

Shackleford Banks: No breeding pairs

CALO Total= 353 breeding pairs